



# Air Quality Summary—November 2012



## **Baton Rouge Area**

### **OZONE**

There were no days that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone in the Baton Rouge area during the month of November, 2012. Please see the graph on page two for daily air quality index levels in the Baton Rouge area during November.

*No Action Days were called for the Baton Rouge area during the month of November.*

### ***PM<sub>2.5</sub>***

There were no violations of the NAAQS for PM<sub>2.5</sub> in the Baton Rouge area during the month of November, 2012. Please see the chart and table on the next page for detailed information on PM<sub>2.5</sub> levels throughout the state.

## **Other Areas of the State**

### **OZONE**

There were no days that exceeded the National Ambient Air Quality Standard (NAAQS) for ozone in areas of the state other than Baton Rouge during the month of November, 2012.

*No Action Days were called for any area of the state during the month of November.*

### ***PM<sub>2.5</sub>***

There were no violations of the NAAQS for PM<sub>2.5</sub> during the month of November, 2012. Please see the graph and table on the next page for detailed information on PM<sub>2.5</sub> levels throughout the state.



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Good

Moderate

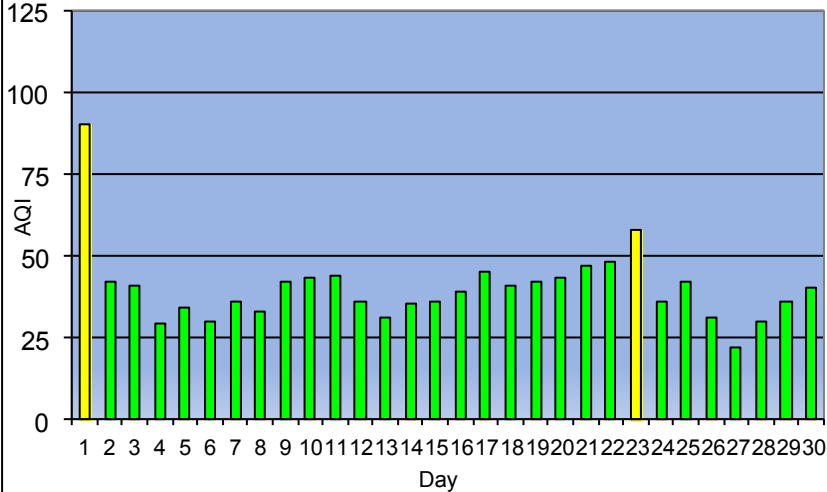
Unhealthy for Sensitive Groups

Unhealthy

Very Unhealthy

Hazardous

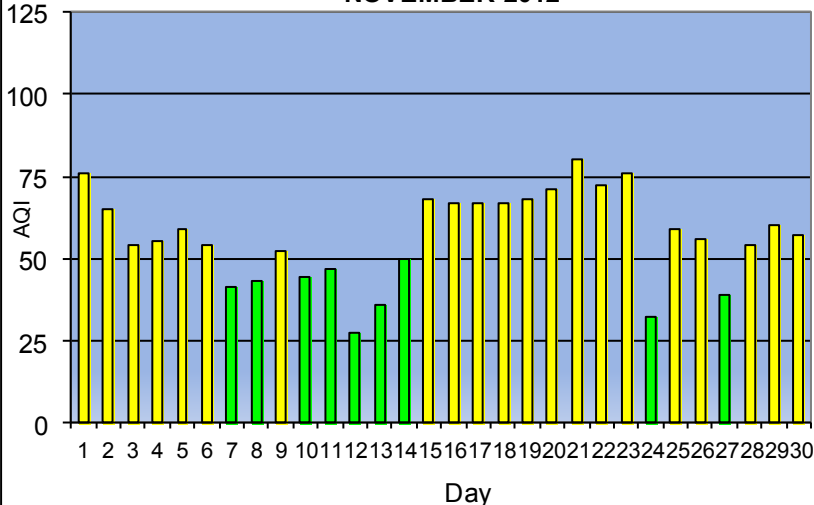
**Baton Rouge Area Daily Maximum AQI For Ozone  
NOVEMBER 2012**



**Statewide High PM<sub>2.5</sub> 24-Hour Average  
Readings - NOVEMBER 2012**

DAY	UG/m3	AQI	SITE
1	25.5	76	Capitol
2	21.3	65	Monroe
3	16.8	54	Monroe
4	17	55	Monroe
5	18.6	59	Monroe
6	16.9	54	Port Allen
7	12.6	41	Lafayette
8	13.3	43	Lafayette
9	16	52	Port Allen
10	13.5	44	Monroe
11	14.4	47	Port Allen
12	8.4	27	Monroe
13	11	36	Monroe
14	15.4	50	Monroe
15	22.6	68	Westlake
16	21.9	67	Chalmette Vista
17	21.9	67	Chalmette Vista
18	21.8	67	Monroe
19	22.4	68	Lafayette
20	23.8	71	Monroe
21	27.2	80	Monroe
22	23.9	72	Chalmette Vista
23	25.7	76	Port Allen
24	10	32	Lafayette
25	18.7	59	Lafayette
26	17.5	56	Monroe
27	12.1	39	Monroe
28	16.7	54	Lafayette
29	19.3	60	Lafayette
30	18.1	57	Lafayette

**Statewide Daily Maximum AQI For PM<sub>2.5</sub>  
NOVEMBER 2012**



# Baton Rouge Climate Summary—November 2012

*\*Prepared by: Jay Grymes*

(based on available preliminary data as of January 7, 2013)

November 2012's monthly average temperature was 57.6°F for Baton Rouge's Metro Airport, 2.8° below the norm. After a record-warm first half of 2012, November continues the recent reversal in the year's earlier temperature trend as the fourth consecutive month with below-normal temperatures at Metro AP. However, even with the recent run of cooler-than-normal months, 2012's 71.2° or the January-thru-November period average ranks as "warmest ever" for that 11-month period for Baton Rouge (based on records back to 1930).

After a moderately warm start to November, 17 of the last 25 days of November were "cooler-than-normal," with daily average temperatures running 8° to 12° below the norm on six of those last 25 days. November's average monthly maximum temperature was 71.6°, near-normal for the month. Daily maximums reached the 80°s on five November dates, with the month's highest afternoon reading of 83° recorded on Nov 3rd. But November's last day in the 80°s was on the 11th -- the remainder of the month was noticeably cooler, with highs topping out in the 60°s for 10 of the final 19 days of the month.

November's monthly average minimum was 43.7°, more than 5° below the normal. Although Metro AP recorded only one morning freeze during November (31° on Nov 25), daily minimums dipped into the 30°s on 11 dates (compared to a long-term average of 7 days), and there were no days with minimums at or above 60° (average of 4-5 days).

Notable frontal-weather periods during November included Nov 4-5, 11-12, 23-24 and 26-27. While all four frontal events produced (temporary) drops in regional temperatures, but not all were rain-makers. The fronts of Nov 4-5 and Nov 23-24 were mainly-dry for Metro Airport, although the month's only reports of "active" weather (localized hail reports, Table 4) and area thunderstorms did occur during the frontal event of Nov 4-5.

Table 1: Average "daylight" sky conditions (to 12,000 ft) during November 2012, based on automated ASOS observations from Baton Rouge's Metro Airport.

Sky Condition: Sunrise to Sunset (Sky Coverage)	Clear to Mostly Sunny (0/10ths – 3/10ths)	Partly Cloudy / Partly Sunny (4/10ths – 6/10ths)	Mostly Cloudy to Cloudy (7/10ths – 10/10ths)
No. Days	20	8	2

Of the 20 of "fair weather" days during November, 15 were classified as "clear sky" days (through the daylight hours). During Nov 13-22, 9 of the 10 days were classified as "clear sky" days with just 1/10th cloud cover on Nov 21st. Nov 27th was November's only totally overcast day (10/10ths cover), with Nov 23rd as the only other mostly cloudy day during the month.

November daily sunrise-to-sunset periods (excluding "Civil Twilight") for Baton Rouge range from 11.9 hours (Nov 1) to 10.3 hours (Nov 30).

# Baton Rouge Climate Summary—November 2012

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(based on available preliminary data as of January 7, 2013)

**Table 2:** November 2012 rainfall for selected sites across the greater Baton Rouge metro area. (Data are preliminary and provided courtesy of the National Weather Service, the LSU Southern Regional Climate Center, the LSU AgCenter, and the CoCoRaHS Volunteer Network.)

Rainfall-Recording Site	Monthly Rainfall	Monthly DFN	No. Days ≥ 0.01"	No. Days ≥ 1.00"
<i>NWS Cooperative Network Sites</i>				
<b>BR – Metro Airport</b>	<b>1.21"</b>	<b>-2.89"</b>	<b>4</b>	<b>0</b>
BR - Concord Estates	2.27"	-2.28"	5	0
BR - Sherwood Forest	1.52"	-2.92"	6	0
Clinton	2.18"	-1.87"	4	0
Denham Springs	2.45"	-1.73"	5	1
Dutchtown	3.26"	--	6	2
Gonzales	2.42"	-2.05"	5	0
Livingston	2.20"	-2.03"	6	0
New Roads	1.40"	-2.82"	2	0
Oaknolia	2.88"	-1.37"	3	1
Plaquemine	1.27"	-2.82"	5	0
Port Allen	1.60"	-2.72"	4	0
St. Francisville	3.30"	-1.28"	5	1
St. Gabriel	2.75"	-1.23"	6	0
<i>CoCoRaHS Volunteer Observers</i>				
Baton Rouge 2.7 SW (LA-EB-2)	2.17"	--	5	0
Baton Rouge 3.5 E (LA-EB-14)	1.74"	--	5	0
Baton Rouge 2.5 E (LA-EB-27)	1.64"	--	5	0
Baton Rouge 4.3 S (LA-EB-41)	1.89"	--	5	0
Baton Rouge 1.4 WSW (LA-EB-46)	2.16"	--	5	0
Baton Rouge 5.3 S (LA-EB-47)	2.20"	--	4	0
Baton Rouge 2.1 S (LA-EB-48)	2.27"	--	5	0
Brownfields 5.8 NE (LA-EB-9)	0.59"(i)	--	--	--
Inniswold 2.8 S (LA-EB-42)	2.60"	--	5	1
Monticello 3.0 ENE (LA-EB-19)	2.11"	--	3	1
Monticello 3.0 SSW (LA-EB-20)	1.51"	--	3	0
Monticello 4.6 NNE (LA-EB-31)	1.78"	--	2	1
Shenandoah 2.1 W (LA-EB-18)	2.34"	--	5	0
Shenandoah 1.5 E (LA-EB-22)	3.24"	--	5	2
Shenandoah 0.8 W (LA-EB-36)	M	--	--	--
Zachary 3.5 WNW (LA-EB-28)	2.38"	--	5	0
Gonzales 4.0 S (LA-AS-5)	2.89"	--	5	0
Gonzales 1.8 NE (LA-AS-9)	M	--	--	--
Prairieville 1.8 NW (LA-AS-10)	3.32"	--	4	2
Port Vincent 4.4 W (LA-AS-2)	3.33"	--	6	0
Wakefield 0.9 WNW (LA-WF-4)	3.29"(i)	--	--	--
<i>Additional Metro Area Sites</i>				
LSU Campus (LA-EB-33)	2.01"	--	5	0
WAFB-TV, Downtown BR	1.63"	--	6	0
LSU AgCenter Ben Hur Farm	2.25"	--	5	0

DFN - Departure-from-Normal

-- - Normals Not Available

M - Missing Value

(e) - Estimated Value

(i) - Incomplete Total

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Baton Rouge Metro AP's rainfall for November totaled just 1.21", nearly 3" below the 30-year norm. November 2012 ranks as the "driest" November since Nov 2008 (1.09") and the 18th "driest" November since 1888 (125 years). But what makes the "dry" November more noteworthy is that it followed a near-record-dry October. Metro AP's two-month total of just 1.61" ranks as the "driest" Oct-plus-Nov total since 2008 and the 4th "driest" on the record books through 1888.

**Table 3:** Distribution of November 2012 rain totals based on sites (Table 2) with complete monthly records for the month (34 sites).

No. Stations	No. Stations	No. Stations	No. Stations	No. Stations	No. Stations
≤ 1.00"	1.01" – 1.50"	1.51" - 2.00"	2.01" - 2.50"	2.51" – 3.00"	> 3.00"
0	3	8	14	4	5

Roughly one-third of the metro area sites (Tables 2 and 3) reported less than 2" of rain for the month, including Baton Rouge's Metro AP.

Based on the 34 sites included in Table 2 (with complete monthly totals), metro area regional rainfall for November 2012 averaged 2.24", with a median of 2.20" -- both values barely more than one-half of Metro AP's 30-year norm (4.10"). All 13 of the NWS Cooperative sites with long-term normals reported below-normal rainfall for the month, with departures in excess of two inches for 8 of the 13 sites.

Most of the metro area sites recorded measurable rainfall on 4 to 6 days during November (by comparison, Metro AP averages 8-9 raindays during November); only 9 of the 34 sites reported daily totals of 1" or more.

November 2012 reports from the Baton Rouge Metro Airport ASOS (Automated Surface Observation system) weather platform included:

- 1 day with thunder (Nov 5), compared to a long-term November average of 2-3 days;
- 16 days with fog, including 5 days (Nov 1-4 & 30) with "dense" fog (visibility under 1/4-mile); and
- 3 days (Nov 5, 23 & 26) with smoke and/or haze.

Daily winds at Metro Airport during November 2012 averaged 4.0 mph, compared to a 28-year September average of 6.3 mph. November 11th was the "windiest" day of the month by far, with a daily average wind speed of 12.4 mph: the day's elevated winds produced ahead of an advancing cold front which pushed through the metro area the following morning. No other day during November recorded an average daily wind speed of more than 8.0 mph. In fact, daily winds averaged less than 5.0 mph on 23 days during the month, with average daily winds under 3.0 mph (essentially 'calm') on 9 November days. Still, peak gusts topped 20.0 mph on 14 days, with gusts exceeding 30.0 mph on 3 dates -- Nov 11, 12 & 26 (all associated with periods of frontal passages).

Note that even with the dry weather during October and November, regional weather experts did not deem conditions to become sufficiently severe to declare the onset of drought conditions for metro Baton Rouge, as evident in the early December **Drought Monitor** (Fig. 3). Although the region was quite dry by the end of November (classified as 'Abnormally Dry'), the combination of an exceptionally wet August and a wetter-than-normal September, coupled with cooler-than-normal weather during October and November -- *i.e.*, reduced evapotranspiration rates & water demand -- helped minimize the overall environmental moisture stress on the region.



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## ***Tropical Review:***

No 'named' tropical systems formed within the Atlantic Basin during November, bringing a "quiet" close to the 2012 Hurricane Season. But a look back at 2012 reminds us that the season as a whole was anything but "quiet." In addition to Louisiana's **Isaac** and the East Coast's **Sandy**, the Caribbean and Central America were walloped by multiple storms. With 19 'named' storms (10 reaching hurricane strength), the 2012 season continues the run of very active tropical seasons which began in 1995. Remarkably, 2012 is the third consecutive season with 19 'named' storms in the Atlantic Basin. (The basin average is closer to 12-15, depending on the averaging period chosen.)

These three consecutive years with 19 'named' storms, along with 19 'named' in 1887, are tied as the third most active seasons on record (in terms of storm numbers), topped only by 20 storms for 1933 and the mega-active 2005 season (with 28 'named' systems).

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- CoCoRaHS Volunteer Network
- U.S. Drought Monitor (<http://drought.unl.edu/DM/>)
- NWS Climate Prediction Center (NWS/CPC)
- NWS Storm Prediction Center (NWS/SPC)
- NWS Hydrometeorological Prediction Center (NWS/HPC)
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- Iowa Environmental Mesonet apps (<http://mesonet.agron.iastate.edu/>)
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\*Jay Grymes, LSU AgCenter Climatologist and WAFB Chief Meteorologist, provides the climatology portion of this report as a free service to DEQ and the citizens of Louisiana.